April 12, 2002 Meeting Summary - DRAFT

Purpose

This document summarizes the April 12, 2002 GTF meeting. It presents some of the broader questions addressed at the meeting and proposes some answers to those questions. Please refer to the meeting binders for detailed information on each presentation/discussion.

Meeting Overview

The Genetics Task Force (GTF) heard from representatives from the three different areas of genetic research: 1) academic and basic science; 2) public health; and 3) biotechnology. The meeting also served as an opportunity for task force members to plan its approach to drafting conclusions and recommendations commensurate with the legislative mandate to the task force.

Questions Answered

Each panel of representatives was asked to address the following questions:

1) *What are the concerns and perceived barriers among researchers with respect to access to and use of DNA and genetic information?*

The academic and basic science research panel identified increasing regulatory/consent requirements and patents as significant barriers to research for developing clinical genetic tests and research examining genotype/drug interactions using biological samples that are linked to identifiers. Dr. Thummel suggested that a requirement to follow up with research subjects regarding the results of their genetic tests would be a significant burden and difficult since the meaning of many genetic tests results is uncertain at this point.

The public health panel identified several barriers to achieving the integration of genetics into public health. These included the lack of a trained workforce, lack of flexibility with federal funds at the state level, lack of federal and state leaders, an outdated genetics plan (the current focus on newborn screening needs to be shifted to accommodate an emphasis on the role of genetics in chronic diseases), restrictions on access to information for public health purposes, and conflicting policies across states with respect to genetic information.

The biotechnology industry panel offered recommendations regarding appropriate state privacy legislation. They recommended that state policies should interact with the industry and do no harm.

2) *What are the future directions and development plans for genetic research?*

The panelists in the academic and basic science research panel stated that some of the future directions of research include the development of meaningful and reliable genetic tests and the continuation of research on the relationships between polymorphisms and clinical outcomes in order to better understand genotype/phenotype relationships and gene/environment interactions.

The public health panel commented that the long-term vision of integrating genetics into public health is to benefit the individual as well as promote population health and that genomics is to

public health what infectious diseases used to be. The panelists projected that in the future there will be an emphasis on the role of genetics in chronic diseases.

The biotechnology industry panel described the development of technologies that are making genetic testing and sequencing much faster and cheaper. The panelists also described the development of drugs that specifically target viruses or bacteria at a genetic level. Another direction of biotechnology industry research includes the promise of reducing the incidence of adverse drug reactions with tailored drug therapies. The industry is also focusing on developing software to aid in the processing and interpretation of genetic data.

3) *What are appropriate and reasonable incentives to stimulate genetics research and development?*

The academic and basic science research panel noted that maintaining the availability of genetic material for research is paramount to the success of future research.

The public health panel noted that education of the public and the public health workforce is essential to achieve the benefits of our increasing knowledge of genomics. Also, the availability of additional funding of public health efforts related to genetics would be an incentive.

The biotechnology industry panel provided recommendations for potential state policy options in the document titled "WBBA and BIO Recommendations for State Privacy Legislation". The recommendations state that legislation should be crafted to protect individual privacy yet not obstruct medical research. They recommend against genetic-specific legislation and for comprehensive legislation that protects the privacy of all personal medical information. Furthermore, they recommend that medical research using information that identifies a particular individual should continue to be governed by existing FDA and NIH regulations (these include 45 CFR 46 and the Belmont Report) to protect the safety and privacy of research participants. Another recommendation is that privacy legislation should protect the current practice of storing tissue samples and medical information, which is critical to medical research; legislation should not require the destruction of medical information and samples. For a comprehensive list of their recommendations, see the handout.

4) *What are the research priorities for researchers with respect to product development? How can those products contribute to public health, safety and welfare?*

The academic and basic science research panel emphasized the contributions that reliable genetic tests can provide to the public. Furthermore, knowing about genotype/phenotype and gene/environment interactions will help develop targeted drug therapies.

The public health panel noted that genomics would contribute greatly to the understanding and prevention of many diseases including chronic, complex diseases.

The biotechnology industry panel discussed the potential to contribute information and technology to the public health sector, however they noted that it is difficult for a for-profit company that is controlled by shareholders to work on products that would not be profitable.

They noted that products developed by the biotechnology industry would contribute to the safety and effectiveness of medical treatments.

Planning for writing conclusions and recommendations for the final report

The task force discussed different approaches to drafting conclusions and recommendations for the final report. The final decisions included dividing into 4 subcommittees.

Subcommittee 1: Use of genetic information in the health care setting
Members: C. Ron Scott (Subcommittee Chair), Robin Bennett, Robert Miyamoto, Maureen Callaghan, Julie Sanford Hanna

This subcommittee will look at 3 areas related to the use of genetic information in the health care setting: a) Diagnosis of symptomatic and asymptomatic conditions; b) Reproductive decisions; and c) Predictive identification of genetic risk factors for low penetrant diseases.

Subcommittee 2: State mandated DNA collection/genetic testing
Members: Maxine Hayes (Subcommittee Chair), Phi Bereano, Brenda Suiter, Howard Coleman, Suzanne Plemmons

This subcommittee will look at the existing systems for state mandated DNA collection and/or genetic testing (Newborn Screening Program and forensic uses of DNA). This includes an analysis of existing privacy policies related to the Newborn Screening Program.

Subcommittee 3: Research
Members: Helen McGough, Peter Byers, Phil Bereano, Amanda DuBois, Vicki Hohner (this subcommittee does not yet have a chair)

This subcommittee will look at the use of genetic information in academic/basic science, public health, and biotechnology industry research.

Subcommittee 4: Other social uses of genetic information including health/life/disability insurance and employment
Members: Mellani Hughes (Subcommittee Chair), Ty Thorsen, Wylie Burke, Nancy Fisher, Joe Finkbonner

This subcommittee will look at the use of genetic information for social purposes such as health/life/disability insurance and employment.

Additional information

1. *How do European Union privacy policies differ from federal U.S. privacy policies?*

The European Union (EU) enacted the EU Data Protection Directive (aka EU Privacy Directive) in October 1998 requiring member countries and those that they share data with to comply with specific criteria for protecting data. The U.S. Department of Commerce website

(http://www.export.gov/safeharbor/sh_overview.html) states, "the United States takes a different approach to privacy from that taken by the European Union. The United States uses a sectoral approach that relies on a mix of legislation, regulation, and self-regulation. The European Union, however, relies on comprehensive legislation that, for example, requires creation of government data protection agencies, registration of data bases with those agencies, and in some instances prior approval before personal data processing may begin."

The EU Privacy Directive mandates that member countries establish legislation addressing a) transparency; b) purpose limitation; c) data quality; d) data transfers; e) special protection for sensitive data including information identifying "racial or ethnic origin, political opinions, religious or philosophical beliefs…[or] concerning health or sex life"; f) government authority; g) data controllers; and h) individual redress. The EU Privacy Directive makes privacy a fundamental right of EU citizens. (Woodward and Roethenbaugh at http://www.dss.state.ct.us/digital/eupriv.html)

The EU takes a "top down" approach and has more stringent privacy policies than the US, therefore US companies that wish to do business with EU member countries must comply with the more rigorous EU standards. Since this has wide-reaching implications on US businesses, the US Department of Commerce and the European Commission adopted a "safe harbor" framework allowing US companies to self-certify and streamline the certification process for complying with EU privacy standards. The US Department of Commerce website states, "The safe harbor -- approved by the EU [in 2000] -- is an important way for U.S. companies to avoid experiencing interruptions in their business dealings with the EU or facing prosecution by European authorities under European privacy laws. Certifying to the safe harbor will assure that EU organizations know that your company provides "adequate" privacy protection, as defined by the Directive." A list of US companies that have self-certified under the safe harbor policy is publicly available on the US Department of Commerce website.

Certifying organizations must comply with the following principles (http://www.export.gov/safeharbor/sh_overview.html):

Notice: Organizations must notify individuals about the purposes for which they collect and use information about them. They must provide information about how individuals can contact the organization with any inquiries or complaints, the types of third parties to which it discloses the information and the choices and means the organization offers for limiting its use and disclosure.

Choice: Organizations must give individuals the opportunity to choose (opt out) whether their personal information will be disclosed to a third party or used for a purpose incompatible with the purpose for which it was originally collected or subsequently authorized by the individual. For sensitive information, affirmative or explicit (opt in) choice must be given if the information is to be disclosed to a third party or used for a purpose other than its original purpose or the purpose authorized subsequently by the individual.

Onward Transfer (Transfers to Third Parties): To disclose information to a third party, organizations must apply the notice and choice principles. Where an organization wishes to transfer information to a third party that is acting as an agent (1), it may do so if it makes sure

that the third party subscribes to the safe harbor principles or is subject to the Directive or another adequacy finding. As an alternative, the organization can enter into a written agreement with such third party requiring that the third party provide at least the same level of privacy protection as is required by the relevant principles.

Access: Individuals must have access to personal information about them that an organization holds and be able to correct, amend, or delete that information where it is inaccurate, except where the burden or expense of providing access would be disproportionate to the risks to the individual's privacy in the case in question, or where the rights of persons other than the individual would be violated.

Security: Organizations must take reasonable precautions to protect personal information from loss, misuse and unauthorized access, disclosure, alteration and destruction.

Data integrity: Personal information must be relevant for the purposes for which it is to be used. An organization should take reasonable steps to ensure that data is reliable for its intended use, accurate, complete, and current.

Enforcement: In order to ensure compliance with the safe harbor principles, there must be (a) readily available and affordable independent recourse mechanisms so that each individual's complaints and disputes can be investigated and resolved and damages awarded where the applicable law or private sector initiatives so provide; (b) procedures for verifying that the commitments companies make to adhere to the safe harbor principles have been implemented; and (c) obligations to remedy problems arising out of a failure to comply with the principles. Sanctions must be sufficiently rigorous to ensure compliance by the organization. Organizations that fail to provide annual self-certification letters will no longer appear in the list of participants and safe harbor benefits will no longer be assured.

Please see the websites indicated above or the following websites for more information:
http://www.privacy.org/pi/intl_orgs/ec/eudp.html
http://www.privacilla.org/business/eudirective.html

2. *What federal regulations apply to privately funded research involving human subjects?*

At least two Federal Regulations may apply to the conduct of research involving human subjects by privately funded entities (these also apply to publicly-funded entities). Below is a summary of the provisions contained within 45 CFR 46 and 21 CFR 50/56. Please see the following websites for additional information:
http://www.fda.gov/oc/gcp/regulations.html
http://www.access.gpo.gov/nara/cfr/waisidx_99/45cfr46_99.html
http://ohrp.osophs.dhhs.gov/polasur.htm
http://www.hhs.gov/topics/humanresearch.html

45 CFR 46 applies to "all research involving human subjects conducted, supported, or otherwise subject to regulation by any federal department or agency which takes appropriate administrative action to make the policy applicable to such research…It also includes research conducted,

supported, or otherwise subject to regulation by the federal government outside the United States." It further states that "research that is neither conducted nor supported by a federal department or agency, but is subject to regulation as defined in Sec 46.102(e) must be reviewed and approved, in compliance with Sec 46.101, Sec 46.102, and Sec 46.107 through Sec 46.117 of this policy, by an institutional review board that operates in accordance with the pertinent requirements of this policy." (45 CFR 46 Sec 46.101 (a) and Sec 46.101 (a)(2)).

45 CFR 46 Sec 46.102 (e) states "Research subject to regulation, and similar terms are intended to encompass those research activities for which a federal department or agency has specific responsibility for regulating as a research activity, (for example, Investigational New Drug requirements administered by the Food and Drug Administration). It does not include research activities which are incidentally regulated by a federal department or agency solely as a part of the department's or agency's broader responsibility to regulate certain types of activities whether research or non-research in nature (for example, wage and hour requirements administered by the Department of Labor).

In addition, some private funding sources such as the American Heart Association, the Ford Foundation, the American Cancer Society, etc may require that researchers comply with 45 CFR 46. Still other privately funded researchers abide by 45 CFR 46 on a voluntary basis regardless of their funding or regulatory source.

The second Federal Regulation that applies to the conduct of privately sponsored research involving human subjects is 21 CFR 50 (Title 21: Food and Drugs; Part 50: Protection of Human Subjects). (http://www.access.gpo.gov/nara/cfr/waisidx_00/21cfr50_00.html).

21 CFR 50

Sec. 50.1 (a) "[A]pplies to all clinical investigations regulated by the Food and Drug Administration under sections 505(i) and 520(g) of the Federal Food, Drug, and Cosmetic Act, as well as clinical investigations that support applications for research or marketing permits for products regulated by the Food and Drug Administration, including food and color additives, drugs for human use, medical devices for human use, biological products for human use, and electronic products…Additional specific obligations and commitments of, and standards of conduct for, persons who sponsor or monitor clinical investigations involving particular test articles may also be found in other parts (e.g., parts 312 and 812). Compliance with these parts is intended to protect the rights and safety of subjects involved in investigations filed with the Food and Drug Administration pursuant to sections 406, 409, 502, 503, 505, 510, 513-516, 518-520, 721, and 801 of the Federal Food, Drug, and Cosmetic Act and sections 351 and 354-360F of the Public Health Service Act."

21 CFR 50 Sec 50.20 provides that "no investigator may involve a human being as a subject in research covered by these regulations unless the investigator has obtained the legally effective informed consent of the subject or the subject's legally authorized representative." Exceptions to this are outlined in 21 CFR 50 Sec 50.23 and Sec 50.24. Exceptions listed in 50.23 include: "(1) The human subject is confronted by a life-threatening situation necessitating the use of the test article.

(2) Informed consent cannot be obtained from the subject because of an inability to communicate with, or obtain legally effective consent from, the subject.
(3) Time is not sufficient to obtain consent from the subject's legal representative.
(4) There is available no alternative method of approved or generally recognized therapy that provides an equal or greater likelihood of saving the life of the subject."
And Sec 50.24 provides that an IRB must evaluate and approve the waiver of informed consent under emergency research situations.

21 CFR 50 also stipulates the required elements of informed consent:
"(a) Basic elements of informed consent. In seeking informed consent, the following information shall be provided to each subject:

(1) A statement that the study involves research, an explanation of the purposes of the research and the expected duration of the subject's participation, a description of the procedures to be followed, and identification of any procedures which are experimental.

(2) A description of any reasonably foreseeable risks or discomforts to the subject.

(3) A description of any benefits to the subject or to others which may reasonably be expected from the research.

(4) A disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the subject.

(5) A statement describing the extent, if any, to which confidentiality of records identifying the subject will be maintained and that notes the possibility that the Food and Drug Administration may inspect the records.

(6) For research involving more than minimal risk, an explanation as to whether any compensation and an explanation as to whether any medical treatments are available if injury occurs and, if so, what they consist of, or where further information may be obtained.

(7) An explanation of whom to contact for answers to pertinent questions about the research and research subjects' rights, and whom to contact in the event of a research-related injury to the subject.

(8) A statement that participation is voluntary, that refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and that the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.

(b) Additional elements of informed consent. When appropriate, one or more of the following elements of information shall also be provided to each subject:

(1) A statement that the particular treatment or procedure may involve risks to the subject (or to the embryo or fetus, if the subject is or may become pregnant) which are currently unforeseeable.

(2) Anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent.

(3) Any additional costs to the subject that may result from participation in the research.

(4) The consequences of a subject's decision to withdraw from the research and procedures for orderly termination of participation by the subject.

(5) A statement that significant new findings developed during the course of the research which may relate to the subject's willingness to continue participation will be provided to the subject.

(6) The approximate number of subjects involved in the study.

21 CFR 56 (Title 21: Food and Drugs; Part 56: Institutional Review Boards) provides specific guidelines on the circumstances under which IRB review is required, the role of an IRB, and exceptions to IRB review for clinical investigations regulated by the Food and Drug Administration. (http://www.access.gpo.gov/nara/cfr/waisidx_00/21cfr56_00.html).

3. Do existing state laws regulate who can request laboratory tests?

An excerpt from the April 1990 AAG opinion suggests that no state law governs the practice of ordering or receiving laboratory tests and results.

"The ordering of laboratory tests is not specifically described as the practice of medicine in RCW 18.71.011... Interpretation of test results appears to fall within the ambit of diagnosis and, therefore, the practice of medicine. [There are] no statutes or cases which limit the identity of the individual ordering a test to a particular class of persons. Thus, …: (a) yes, a lawyer may order a test on another individual...; (b) yes, a private individual may order a lab test on him/herself... In addition, a class of persons about which there was no inquiry, but which is increasing in number as a requester of tests, are employers - i.e., drug/alcohol testing. Some of those employers may have a health officer-physician who orders and interprets the results of the tests. Others, smaller companies may not."

RCW 18.71.011 Definition of practice of medicine -- Engaging in practice of chiropractic prohibited, when: A person is practicing medicine if he does one or more of the following: (1) Offers or undertakes to diagnose, cure, advise or prescribe for any human disease, ailment, injury, infirmity, deformity, pain or other condition, physical or mental, real or imaginary, by any means or instrumentality; (2) Administers or prescribes drugs or medicinal preparations to be used by any other person; (3) Severs or penetrates the tissues of human beings; (4) Uses on cards, books, papers, signs or other written or printed means of giving information to the public, in the conduct of any occupation or profession pertaining to the diagnosis or treatment of human disease or conditions the designation "doctor of medicine", "physician", "surgeon", "m.d." or any combination thereof unless such designation additionally contains the description of another branch of the healing arts for which a person has a license: Provided however, that a person licensed under this chapter shall not engage in the practice of chiropractic as defined in RCW 18.25.005

On the federal level, the Clinical Laboratories Improvement Amendments (CLIA) regulations require that certified labs "must perform tests only at the written or electronic request of an authorized person. Oral requests for laboratory tests are permitted only if the laboratory subsequently requests written authorization for testing within 30 days." The definition of authorized person is "an individual authorized under State law to order tests or receive test results, or both." (http://www.phppo.cdc.gov/clia/regs/toc.asp). Washington state law does not specifically define who may order laboratory tests.

4. Is there an area of research involving human subjects that does not fall under federal research oversight?

Privately funded or unfunded researchers who are not required by their institutions or sponsors to obtain IRB approval or comply with federal regulations may conduct research without such oversight but data from such research could not be used to support FDA approval of a test or product.

5. *Do existing state laws/regulations address the issue of testing biological samples for health/life/disability insurance?*

Regulations that address the collection use and disclosure of personal health information may apply to biological samples (saliva, blood, tissue, etc) collected by insurance companies.

WAC 284-04-120(23) defines Nonpublic personal health information as "health information: (a) That identifies an individual who is the subject of the information; or (b) With respect to which there is a reasonable basis to believe that the information could be used to identify an individual."

WAC 284-04-500 (Health information privacy policies and procedures) limits the collection, use and disclosure of personal health information. It states: "All licensees shall develop and implement written policies, standards and procedures for the management of health information, including policies, standards and procedures to guard against the unauthorized collection, use or disclosure of nonpublic personal health information by the licensee consistent with regulations adopted by the U.S. Department of Health and Human Services governing health information privacy (45 CFR 160 through 164) which shall include:

(1) Limitation on access to health information by only those persons who need to use the health information in order to perform their jobs;

(2) Appropriate training for all employees;

(3) Disciplinary measures for violations of the health information policies, standards and procedures;

(4) Identification of the job titles and job descriptions of persons that are authorized to disclose nonpublic personal health information;

(5) Procedures for authorizing and restricting the collection, use or disclosure of nonpublic personal health information;

(6) Methods for exercising the right to access and amend incorrect nonpublic personal health information;

(7) Methods for handling, disclosing, storing and disposing of health information;

(8) Periodic monitoring of the employee's compliance with the licensee's policies, standards and procedures in a manner sufficient for the licensee to determine compliance and to enforce its policies, standards and procedures; and

(9) Methods for informing and allowing an individual who is the subject of nonpublic personal health information to request specialized disclosure or nondisclosure of nonpublic personal health information as required in this chapter.

(10) A licensee shall make the health information policies, standards and procedures developed pursuant to this section available for review by the commissioner.

6. *What is the text of the Washington state law that prohibits the marriage of cousins?*

Title 26 Domestic Relations Chapter 26.04 Marriage Section 26.04.020 lists conditions under which marriage is prohibited in Washington State.

26.04.020. Prohibited marriages
(1) Marriages in the following cases are prohibited:
…(b) When the husband and wife are nearer of kin to each other than second cousins, whether of the whole or half blood computing by the rules of the civil law…

Supplemental information for the Genetic Privacy and Genetic Discrimination Matrix for Washington State

The following is supplemental information to the Genetic Privacy and Genetic Discrimination Matrix for Washington State under the intersection of "45 CFR 46" and "Includes Exemptions for Research". First is an excerpt from 45 CFR 46 regarding research involving human subjects that is exempt from the requirements of 45 CFR 46. Following it is an excerpt that describes circumstances for which a waiver of consent is appropriate.

45 CFR 46 Sec 46.101
(b) Unless otherwise required by department or agency heads, research activities in which the only involvement of human subjects will be in one or more of the following categories are exempt from this policy:

(1) Research conducted in established or commonly accepted educational settings, involving normal educational practices, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

(3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) The human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) require(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

(4) Research, involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

(5) Research and demonstration projects which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) Public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures;

or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

(6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the Food and Drug Administration or approved by the Environmental Protection Agency or the Food Safety and Inspection Service of the U.S. Department of Agriculture. c) Department or agency heads retain final judgment as to whether a particular activity is covered by this policy.

(d) Department or agency heads may require that specific research activities or classes of research activities conducted, supported, or otherwise subject to regulation by the department or agency but not otherwise covered by this policy, comply with some or all of the requirements of this policy.

(e) Compliance with this policy requires compliance with pertinent federal laws or regulations which provide additional protections for human subjects.

45 CFR 46 Sec 46.116

(c) An IRB may approve a consent procedure which does not include, or which alters, some or all of the elements of informed consent set forth above, or waive the requirement to obtain informed consent provided the IRB finds and documents that:

(1) The research or demonstration project is to be conducted by or subject to the approval of state or local government officials and is designed to study, evaluate, or otherwise examine: (i) Public benefit of service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs; and

(2) The research could not practicably be carried out without the waiver or alteration.

(d) An IRB may approve a consent procedure which does not include, or which alters, some or all of the elements of informed consent set forth in this section, or waive the requirements to obtain informed consent provided the IRB finds and documents that:

(1) The research involves no more than minimal risk to the subjects;

(2) The waiver or alteration will not adversely affect the rights and welfare of the subjects;

(3) The research could not practicably be carried out without the waiver or alteration; and

(4) Whenever appropriate, the subjects will be provided with additional pertinent information after participation.